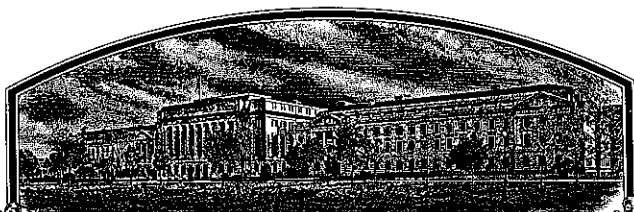


No.

9100241



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

The Ohio State University Research Foundation

**Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS BY THE OWNER OF THE RIGHTS. (34 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SPELT WHEAT

'GR 900'

*In Testimony Whereof, I have hereunto set
my hand and caused the seal of the Plant
Variety Protection Office to be affixed
at the City of Washington, D.C.
this 31st day of December in
the year of our Lord one thousand nine
hundred and ninety-two.*

Attest:

Kenneth E. Evans
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Charles M. Dign
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

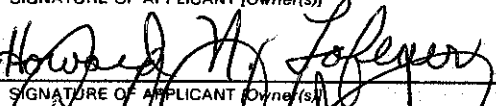
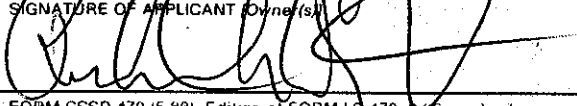
1. NAME OF APPLICANT(S) (as it is to appear on the Certificate)		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO.	3. VARIETY NAME
The Ohio State University Research Foundation			GR 900
4. ADDRESS (street and no. or R.F.D. no., city, state, and ZIP)		5. PHONE (include area code)	FOR OFFICIAL USE ONLY PVPO NUMBER 9100239 ⁴¹ Filing Date Aug. 5, 1991 Time <input type="checkbox"/> A.M. <input type="checkbox"/> P.M. Filing and Examination Fee: \$ 2150.00 Date August 5, 1991 Certificate Fee: \$ 250.00 Date Dec. 10, 1992
1960 Kenny Road Columbus, OH 43210-1063			
6. GENUS AND SPECIES NAME	7. FAMILY NAME (Botanical)		
Triticum spelta L./OR T. aestivum L. var spelta	Graminae		
8. CROP KIND NAME (Common Name)		9. DATE OF DETERMINATION	
Spelt		9/9/85	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.)			
Agricultural Experiment Station			
11. IF INCORPORATED, GIVE STATE OF INCORPORATION		12. DATE OF INCORPORATION	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS			
Dr. H. N. Lafever Agronomy Department Ohio Agricultural Research and Development Center 1680 Madison Avenue, Wooster, OH 44691			
		PHONE (include area code): 216-263-3886	
14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow INSTRUCTIONS on reverse)			
a. <input checked="" type="checkbox"/> Exhibit A, Origin and Breeding History of the Variety. b. <input checked="" type="checkbox"/> Exhibit B, Novelty Statement. c. <input checked="" type="checkbox"/> Exhibit C, Objective Description of Variety. d. <input type="checkbox"/> Exhibit D, Additional Description of Variety. e. <input checked="" type="checkbox"/> Exhibit E, Statement of the Basis of Applicant's Ownership. f. <input checked="" type="checkbox"/> Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office 7/31/91 g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,150) made payable to "Treasurer of the United States."			
15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See section 83(a) of the Plant Variety Protection Act.)			
<input checked="" type="checkbox"/> YES (If "YES," answer items 16 and 17 below) <input type="checkbox"/> NO (If "NO," skip to item 18 below)			
16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?		17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?	
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		<input checked="" type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED	
18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?			
<input type="checkbox"/> YES (If "YES," through <input type="checkbox"/> Plant Variety Protection Act <input type="checkbox"/> Patent Act. Give date: _____) <input checked="" type="checkbox"/> NO			
19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES?			
<input checked="" type="checkbox"/> YES (If "YES," give names of countries and dates) U.S. only - 1st date of sale, Sept. 11, 1990 <input type="checkbox"/> NO			
20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.			
The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.			
Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF APPLICANT [Owner(s)]		CAPACITY OR TITLE	DATE
		(Breeder)	7/18/91
SIGNATURE OF APPLICANT [Owner(s)]		CAPACITY OR TITLE	DATE
		Vice President of Development	7/31/91

Exhibit AOrigin and Breeding History of the Variety

1. GR 900 spelt originated at The Ohio State University, Ohio Agricultural Research and Development Center from a mutagen treated population of a local collection of common spelt. The first selection was made in 1973 consisting of one head selected in a bulk population in the M2 generation following treatment. It was reselected in 1982 in the manner described below.
2. Breeder seed consists of the descendants of three heads selected in the M11 generation in 1982 which were bulked following harvest in 1986 to constitute Breeder seed after observing the progeny through the M12-M15 generations (grown in 1983-1986) for uniformity and homogeneity.
3. GR 900 appears to be very uniform and homozygous as observed in the field over the past several years. This is to be expected of the progeny of three single plants selected in the M11 generation and examined for uniformity and homogeneity through the M12-M15 generations.
4. GR 900 appears very stable and true breeding as evidenced by agronomic and pathological examination of the M12-M15 generations in special purification and increase nurseries.
5. Variants in this line have been virtually non-existent as evidenced by observations in the M12-M15 generations.
6. The variety was selected primarily for high yielding ability. In addition, selection for other important agronomic traits was exercised. The variety was tested and selected in comparison primarily to common spelt, the only commercially available type on the market during the development of this variety.
7. The variety was originally offered to a licensee in 1986, but was declined by the licensee. Consequently, no production of the variety occurred in 1987-1989, following which time the licensee decided to enter into a contractual agreement. Stored seed from the 1986 production of Breeder seed was thus seeded in 1989 and first sold in the fall of 1990.

Exhibit BNovelty Statement and Botanical Description of the Variety

GR 900 is an awnless, brown chaffed cultivar. It exhibits large heads and large kernels. The cultivar appearance is most similar to Champ, but differs from Champ in several aspects. Namely, GR 900 usually has no terminal tip awn or if it is present it rarely exceeds one-quarter inch in length while that of Champ is usually one inch in length. GR 900 also appears to normally have larger, more wheat-like heads when grown side by side with Champ. Also, the glume width of GR 900 is slightly wider when grown side by side with Champ.

GR 900 is also approximately 5 cm shorter than Champ at maturity. Yields of GR 900 are not usually significantly different from Champ.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
COMMODITIES SCIENTIFIC SUPPORT DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (TRITICUM SPP.)

9100241

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

The Ohio State University Research Foundation

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)

1314 Kinnear Rd.
Columbus, OH 43212-1194

FOR OFFICIAL USE ONLY

PVPO NUMBER 9100241

VARIETY NAME OR TEMPORARY
DESIGNATION

GR 900

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g., 089 or 09) when number is either 99 or less or 9 or less.

1. KIND:

4 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:

2 1 = SPRING 2 = WINTER 3 = OTHER (Specify) 1 = SOFT 3 = OTHER (Specify)
2 = HARD Not determined

2 1 = WHITE 2 = RED 3 = OTHER (Specify)

3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:

233 FIRST FLOWERING 236 LAST FLOWERING

4. MATURITY (50% Flowering):

NO. OF DAYS EARLIER THAN 1 = ARTHUR 2 = SCOUT 3 = CHRIS
9 NO. OF DAYS LATER THAN 1 4 = LEMHI 5 = NUGAINE 6 = LEEDS

5. PLANT HEIGHT (From soil level to top of head):

124 CM. HIGH
33 CM. TALLER THAN 1
 CM. SHORTER THAN 1 = ARTHUR 2 = SCOUT 3 = CHRIS
4 = LEMHI 5 = NUGAINE 6 = LEEDS

6. PLANT COLOR AT BOOTING (See reverse):

2 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHOR COLOR:

1 1 = YELLOW 2 = PURPLE

8. STEM:

1 Anthocyanin: 1 = ABSENT 2 = PRESENT 2 Vaxy bloom: 1 = ABSENT 2 = PRESENT
2 Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT 1 Internodes: 1 = HOLLOW 2 = SOLID
45 NO. OF NODES (Originating from node above ground) 28 CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:

2 Anthocyanin: 1 = ABSENT 2 = PRESENT (trace amt.) 2 Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:

1 Flag leaf at booting stage: 1 = ERECT 2 = RECURVED 3 = OTHER (Specify) 2 Flag leaf: 1 = NOT TWISTED 2 = TWISTED
1 Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT 2 Vaxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT
16 MM. LEAF WIDTH (First leaf below flag leaf) 29 CM. LEAF LENGTH (First leaf below flag leaf):

11. HEAD:

☐ 1 Density: 1 = LAX 2 = DENSE
 ☐ 1 Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE
 3 = OTHER (Specify) _____

☐ 1 Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

☐ 5 Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED
 5 = BROWN 6 = BLACK 7 = OTHER (Specify): _____

☐ 1 ☐ 2 CM. LENGTH
 ☐ 1 ☐ 1 MM. WIDTH

12. GLUMES AT MATURITY:

☐ 3 Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.)
 3 = LONG (CA. 9 mm.)
 ☐ 3 Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.)
 3 = WIDE (CA. 4 mm.)

☐ 4-5 Shoulder: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED
 shape: 4 = SQUARE 5 = ELEVATED 6 = APICULATE
 ☐ 1-2 Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

☐ 1 1 = WHITE 2 = RED 3 = PURPLE (trace of purple)

14. SEEDLING ANTHOCYANIN:

☐ 1 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

☐ 1 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

☐ 3 Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL
 ☐ 2 Check: 1 = ROUNDED 2 = ANGULAR

☐ 3 Brush: 1 = SHORT 2 = MEDIUM 3 = LONG
 ☐ 1? Brush: 1 = NOT COLLARED 2 = COLLARED

☐ N.A. Phenol reaction: 1 = IVORY 2 = FAWN 3 = LT. BROWN
 (See instructions): 4 = BROWN 5 = BLACK

☐ 3 Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) _____

☐ 9 MM. LENGTH
 ☐ 3 ☐ 5 MM. WIDTH
 ☐ 3 ☐ 8 GM. PER 1000 SEEDS

17. SEED CREASE:

☐ 3 Width: 1 = 60% OR LESS OF KERNEL 'WINOKA'
 2 = 80% OR LESS OF KERNEL 'CHRIS'
 3 = NEARLY AS WIDE AS KERNEL 'LEMHI'
 ☐ 3 Depib: 1 = 20% OR LESS OF KERNEL 'SCOUT'
 2 = 35% OR LESS OF KERNEL 'CHRIS'
 3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 0 STEM RUST (Races)
 ☐ 2 LEAF RUST (Races) (Field)
 ☐ 0 STRIPE RUST (Races)
 ☐ 2 LOOSE SMUT

☐ 1 POWDERY MILDEW
 ☐ 0 BUNT
 ☐ OTHER (Specify) _____

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 0 SAWFLY
 ☐ 1 APHID (Bydv.)
 ☐ 0 GREEN BUG
 ☐ 0 CEREAL LEAF BEETLE

☐ OTHER (Specify) _____
 HESSIAN FLY RACES:
 ☐ 0 GP
 ☐ 0 A
 ☐ 0 B
 ☐ 0 C

☐ 0 D
 ☐ 0 E
 ☐ 0 F
 ☐ 0 G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Champ	Seed size	Champ
Leaf size	Common	Seed shape	Champ
Leaf color	Champ	Coleoptile elongation	-
Leaf carriage	-	Seedling pigmentation	-

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

- (a) L.W. Briggles and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.
- (b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 2846, the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

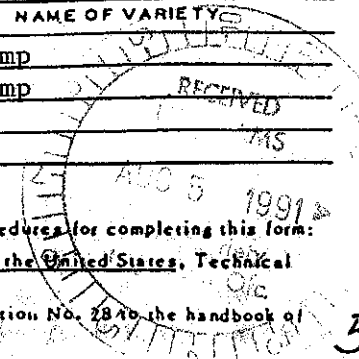


Exhibit EStatement of the Basis of Applicant's Ownership

The originating mutagen treatment, early line evaluation, selection, reselection, testing, purification, and final increase were all performed by the applicant breeder (Dr. H. N. Lafever) with the assistance of technical support personnel on the property of The Ohio State University, Ohio Agricultural Research and Development Center utilizing funds provided for such research. Ownership of the cultivar shall remain with the Ohio State University, Ohio Agricultural Research and Development Center, however, through the Ohio State University Research Foundation, exclusive rights to produce, promote, and market this variety have been granted, by contract, to the Agricultural Genetic Research Association.

9100241

2739 Heyl Rd.
Wooster, OH 44691
November 14, 1992

Dr. Kenneth H. Evans, Commissioner
Plant Variety Protection Office
NAL Bldg., Room 500
10301 Baltimore Blvd.
Beltsville, MD. 20705-2351

Dear Ken:

In response to your request for milling and baking data on our spelt variety 'GR900' (PVP Application No. 9100241) I must inform you that this crop variety is not intended for milling and baking usage, thus, it has never been tested for milling and baking quality. Spelt, in this country, has traditionally been used only as a feed grain, the use for which this variety was intended. In view of this usage I can provide you with % protein information as follows:

<u>Spelt Variety</u>	<u>% Protein</u>
Common	10.5
Champ	11.7
GR900	10.6

These values are the average of composited samples tested in each of two years - a total of 8 samples according to my records.

I am forwarding the Certificate Order Form to Dr. Paul LaFyatis, OSU Research Foundation, 1960 Kenny Rd., Columbus, OH 43210-1063 for issuance of the \$250. certificate fee to your office under separate cover.

Sincerely yours,

Howard N. Lafever

Howard N. Lafever

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